# Middle Articles

## CONTEMPORARY THEMES

# Prevalence and Early Detection of Heroin Abuse

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Heroin abuse has been an increasing cause for concern over the past three years. Home Office figures for 1966 and 1967 (personal communication) show that not only has the number of known cases risen but that the characteristics of the population affected have changed. Up to 1964 the majority of subjects were over 30 years old and were either "therapeutic" or belonged to the medical or allied professions. Those responsible for the increase in new cases belong to neither of these two groups. They are young people in their late teens or early twenties.

A reflection of this general trend has been observed by us in Crawley New Town. As clinical psychiatrists in charge of the community services we were able, when faced with a sudden influx of referrals, to examine the extent of the problem in our area.

This is a report of our investigation and the methods we used for detecting young users of heroin who had not been referred for treatment. As these methods were devised by following clues obtained during the course of everyday clinical practice they may be of interest to other clinicians and epidemiologists in this field.

Though our psychiatric service covers a wider area, this report is limited to Crawley, a new town with a population of 62,130, of which 41% are under 20 years of age (Registrar General, 1966). The study covers both sexes in the age groups 15–20.

### Aims and Antecedents

Our aims were: (1) *to discover if there was an undetected pool of heroin users in the community,* and (2) *to test various methods for the early detection of cases.*

In accordance with W.H.O. (1967) recommendations we established a first priority: the discovery of young heroin users, leaving aside the question of whether they were dependent on the drug or not.

Until 1967 we had no referrals of juvenile users of heroin in Crawley. Retrospectively we found that in 1966 we had missed some cases. For instance, two girls were treated by us as in-patients that year for abuse of amphetamines, and we have discovered recently that they were taking heroin at the time.

In March 1967 two boys aged 16 and 19 were referred by their general practitioner for heroin abuse ; both were regularly using the drug intravenously. Two more were referred in April and another three in early May. These patients had all been using heroin for many months before they were sent to us for treatment. They told us that there were many more young people besides themselves who were taking heroin. It seemed, from their remarks, that the habit was widespread in the community and that general-practitioner referrals or requests for a court report, the ways in which heroin users normally come to the notice of psychiatrists, did not detect the heroin abuse early enough. This prompted us to try to develop screening techniques which would aid early detection.

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### Collection of Data and Screening Methods

This study was carried out between 1 May and 31 December 1967. For information about heroin users who were not being referred to us we first approached two obvious sources: (1) the probation service and (2) the police. Our next source was one which has not previously been reported: it was (3) the heroin users we were already treating. In addition we initiated two special surveys of young people ; (4) a survey of hepatitis in the community, and (5) a survey of admissions to the local casualty department for overdoses of stimulants or hypnotics. Thus we had five screening methods for our study.

(1) *Probation Service.*—The local probation officers were asked to give us the names, addresses, and any information they could provide about anyone known to them who was using drugs. They continued to keep us informed about anyone under their care who admitted to them that they were taking heroin.

(2) *Police.*—A similar approach was made to the police, who also co-operated throughout the study by supplying data on people who were convicted for possessing heroin, were searched on suspicion of possessing or being under the effects of heroin, or were known to them as being often seen in the company of known heroin users.

(3) *Patients (Heroin Users).*—In telling us how they came to take heroin our patients sometimes disclosed the names of others who were in the same predicament as themselves. As treatment progressed and their confidence was gained, they spoke freely, and we realized that we had here a rich source of information. Somewhat sceptically at first, but with increasing certainty as these names were confirmed from other sources—for example, by being referred for treatment—we recorded whatever they told us about these people. Usually we were able to record the age, address, school, etc., of all those who were named by our patients as heroin users.

(4) *Jaundice Survey.*—We observed a recent history of hepatitis in most of the first heroin users referred to us. A high incidence of jaundice among drug addicts has been mentioned in the literature (Altschul *et al.*, 1952 ; Cardon and Beck, 1952 ; Levine and Payne, 1960), and we thought that perhaps Sherlock's (1963) dictum, that "any patient developing jaundice within six months of any procedure involving puncture of the skin must be assumed to have contacted serum jaundice unless proven otherwise," might be paraphrased for heroin users as follows: "any procedure involving puncture of the skin could lead to serum jaundice within six months." We therefore carried out a survey of all the general practices in Crawley recording the names of every patient in the age group 15–25 years who had had jaundice during 1966 or 1967. The diagnosis of virus hepatitis supported by liver-function

tests had been made in every instance. None of the cases found was over 20 years.

(5) *Casualty Survey.*—Our experience and that of other workers in this field suggest that heroin use is only one manifestation of a poly-drug problem. If a person abuses one drug he will tend to abuse others. The heroin users we treated were taking or often had taken other drugs (especially those containing amphetamines) in large amounts. They were therefore at risk of an overdose. However, hospital casualty officers rarely consider accidental overdoses of stimulant drugs as suicide attempts, and tend not to refer these cases to the psychiatrist. They are commonly discharged when their acute symptoms subside, while cases of overdose of barbiturate and other similar drugs are routinely referred to us. We therefore searched the casualty department records and abstracted relevant data about all patients aged 15–25 years who had been admitted for overdose of hypnotics *or* stimulants between January 1966 and December 1967. Here again we found that all our subjects were under 21.

*Direct referrals.*—The five screening methods described above provided us with the names of known or alleged heroin users in the community about whom we would otherwise have remained in ignorance. In addition we continued to have referrals through the normal channels—that is, from general practitioners and some cases where the court requested a psychiatric report on a person awaiting trial for possession of heroin (such requests are not automatic).

## Recording Data

As the names from each of the five sources described above reached us they were entered on a cumulative register, each name being cross-checked with names received from every other source (*a*) to eliminate duplication, and (*b*) to collate all sources of "evidence" or presumed evidence about each name. Similarly, each case referred direct by the general practitioner was entered in the register or if (as usually happened) his name had already been provided by one of our screening techniques the additional data were recorded.

We recorded full details, not only about the source but about the quality of the information—for example, whether the person was convicted of heroin possession or was only suspected by the police; whether he himself had told the doctor or probation officer he was taking it or whether another person had reported him to be a user.

In every instance we also recorded the date when each method brought out the name. For information from the probation officer, police, and the jaundice and overdose surveys, the date recorded was that on which the event took place—that is, charged with possession of heroin, searched by police as a suspect, patient mentioned it to general practitioner, hepatitis was diagnosed, admitted because of overdose, etc. However, when a heroin user gave us a name it was the date the information was supplied that was recorded.

The entries for a typical case would run thus: jaundice 12 December 1966; named by heroin user 5 May 1967; named by a second heroin user 15 June 1967; police suspect 23 September 1967; general-practitioner referral 5 October 1967; seen by us in the outpatient clinic 8 October 1967.

Persons about whom there was no evidence of heroin use but only of the abuse of other drugs were separately recorded, and were added to the register only when some information about heroin was received.

## Classification of Cases

We classified all the names obtained by the five screening methods and by direct referral as follows: (1) confirmed heroin users, (2) probable users, (3) suspects, and (4) non-users.

We called a person a "confirmed user" if we ourselves or another psychiatrist were treating him for heroin use; if he admitted to his general practitioner, the police, or a probation officer that he had been using the drug; if he had been convicted for possession of heroin; or finally, by an accumulation of circumstantial evidence, if his name was obtained by three or more independent screening techniques.

We called a person a "probable" user if none of the above applied but his name was obtained by two of the independent screening techniques. "Suspects" were those reported by one screening method only. "Non-users" were those subsequently seen by one of us and discovered not to be using heroin.

Each screening method was regarded as one independent source of information. Thus, however many patients independently named a suspect this was still treated as information from one screening method only—that is, heroin user—and had to be confirmed by evidence from one or more of the others—for example, jaundice or police—before it was accepted as evidence for probable or confirmed use.

## Findings

Ninety-eight names were collected by these methods. Table I shows that according to our definition 50 were confirmed users, 5 probable, 37 suspects, and 6 non-users. So there were 92 possible cases.

TABLE I.—*Heroin Use by Earliest Source of Information*

| First Source of Information | Category of Use | | | | |
|---|---|---|---|---|---|
| | Confirmed | Probable | Suspect | Non-user | Total |
| G.P. referral .. | 8 | 0 | 0 | 0 | 8 |
| Screening methods .. | 42 | 5 | 37 | 6 | 90 |
| Total .. | 50 | 5 | 37 | 6 | 98 |

## Early Detectors

Table I shows the number of cases found in each category by the earliest source of information in the two-year period we are considering (January 1966 to December 1967). It shows that only eight people had consulted general practitioners for their addiction before they came within the ambit of one of the screening techniques. Since no one was first detected by our being called for an opinion on a patient on remand, these eight were the only individuals who reached us by the normal direct channels of referral.

## Prevalence Rates

Our earliest information on these 92 individuals goes back to January 1966, but they all remained in the area for at least a part of 1967, had not to our knowledge given up taking heroin, and were all still under 21 years of age. We therefore compiled a one-year prevalence rate for 1967 for the age group 15–20.

In this age group (numbering 5,880) 50 were confirmed heroin users. This is an observed rather than a "true" prevalence rate—that is, we have no certainty that we screened out every case in the population and "cases" were based on our own definition.

TABLE II.—*Observed Prevalence of Heroin Use in People Aged* 15–20 *in Crawley New Town in* 1967 (*Population* 5,880)

| Category of Use | No. | Rate per 1,000 Population | |
|---|---|---|---|
| | | For Each Category | Cumulative |
| Confirmed users .. | 50 | 8·50 | — |
| Probable users .. | 5 | 0·85 | 9·35 |
| Suspected users .. | 37 | 6·29 | 15·64 |
| Total .. | 92 | 15·64 | 15·64 |

The rate rose to 15.64 per thousand when the total number of probable and suspected users were included (Table II).

Since 90% of our cases were male, it seems that heroin use is primarily a male problem. We therefore compiled male rates separately. Table III shows that in the male population of 3,050 aged 15–20, 14.75 per thousand were confirmed users; a rate which rose to 27.21 per thousand when probable and suspected users were included.

TABLE III.—*Observed Prevalence of Heroin Use in Males Aged 15–20 in Crawley New Town in 1967 (Population 3,050)*

| Category of Use | No. | Rate per 1,000 Population | |
|---|---|---|---|
| | | For Each Category | Cumulative |
| Confirmed users .. | 45 | 14·75 | — |
| Probable users .. | 5 | 1·64 | 16·39 |
| Suspected users .. | 33 | 10·82 | 27·21 |
| Total .. | 83 | 27·21 | 27·21 |

## Comparative Value of Screening Methods

Early diagnosis of heroin abuse is urgent, especially in the young, who do not appreciate its seriousness. With heroin, dependence and tolerance develop quickly, reducing the chances of successful treatment. Furthermore, the longer each heroin user is left without supervision the greater the chances are that others will be contaminated. Our second aim, therefore, was to evaluate each screening technique as a source of earliest possible information about heroin use. We did this in two ways: (1) By comparing the number of names first produced by each of the five screening methods, regardless of subsequent confirmation. In this comparison the source for which the earliest date was recorded in our register was the one used. So if a possible user was named by one of our patients in June 1967, and we subsequently found he (the suspect) had had jaundice in April 1967, we recorded user as the first source. (2) By examining each technique in terms of the number of confirmed cases it produced when it was the first source to indicate heroin use.

Table IV shows the number of names screened out by each method, and compares the numbers of confirmed, probable, and suspect cases revealed by each.

TABLE IV.—*Value of Each Screening Method*

| First Source of Information about Heroin Use | No. of Names Detected | Category of Use | | | |
|---|---|---|---|---|---|
| | | Confirmed | Probable | Suspected | Non-user |
| Direct G.P. referral .. .. | 8 | 8 | — | — | — |
| Jaundice survey .. .. | 20 | 9 | 4 | 7 | — |
| Casualty survey { Amphetamines .. | 7 | 6 | — | 1 | — |
| Casualty survey { Barbiturates .. | 8 | 2 | — | — | 6 |
| By heroin users in treatment .. | 46 | 17 | 1 | 28 | — |
| Police { Convictions .. | 4 | 4 | — | — | — |
| Police { Other evidence .. | 3 | 2 | — | 1 | — |
| Probation officers .. .. | 2 | 2 | — | — | — |
| Total .. .. | 98 | 50 | 5 | 37 | 6 |

The two most productive screening methods were the heroin users themselves and the jaundice survey. Heroin users provided first evidence on 46 individuals, the hepatitis survey on 20. These two methods also provided the greatest number of confirmed cases. Thirteen of the names produced by the jaundice survey and 18 of those given by heroin users were either confirmed or probable cases—that is, they were supported by other evidence. By the end of 1967 it was not possible to say whether any of the remaining seven people who had had jaundice and the 28 named by our patients were actually heroin users or not. (Note : Additional data received after December 1967 have all been in the direction of supporting the evidence for use of heroin.)

The casualty survey also proved fruitful. Six out of the seven young people about whom amphetamine overdose provided first evidence subsequently proved to be confirmed users. Barbiturate overdoses, on the other hand, were poor indicators of heroin use. Two of the eight whose names were provided were confirmed cases, but six turned out to be false-positives—that is, non-users of heroin.

Most of the cases that first came to light via the courts, police, and probation officers were confirmed, as were all those first reported by general practitioners. However, these sources together provided less than one-third of all the confirmed cases.

We have described how each of the screening techniques and the general practitioners' knowledge of cases was used to confirm the earliest sources of information. Table V gives the results of this analysis for confirmed cases only.

TABLE V.—*Subsequent Confirmation of Earliest Indicator of Heroin Use in 50 Confirmed Cases*

| First Indicator of Heroin Use | No. of Cases | Subsequent Source of Confirmation | | | | |
|---|---|---|---|---|---|---|
| | | G.P. | Jaundice | Casualty | Police or Probation | Users in Treatment |
| G.P. .. .. | 8 | — | 2 | 1 | 5 | 5 |
| Jaundice .. .. | 9 | 8 | — | 1 | 4 | 5 |
| Casualty .. .. | 8 | 4 | 3 | — | 2 | 4 |
| Police or probation | 8 | 2 | 1 | 0 | — | 4 |
| Users in treatment | 17 | 9 | 7 | 0 | 7 | — |
| Total .. | 50 | 23 | 13 | 2 | 18 | 18 |

The fact that we were carrying out the survey in 1967 with the co-operation of local general practitioners led to increased referrals for treatment as general practitioners became more concerned to look for cases and more sophisticated in recognizing jaundice as an indicator of heroin use. These referrals helped to confirm 23 names obtained by the five screening methods as well as being the first evidence of heroin use in eight cases. By the end of 1967, therefore, we had seen and were treating 31 cases in this age group.

## Discussion

### Prevalence

Do our findings reflect the national upward trend in heroin use in young people and depict its extent or are they peculiar to Crawley ? Until similar studies are carried out in other parts of the country we will not be able to decide whether the situation in Crawley differs from that found elsewhere. It is not possible to compare our findings with other prevalence rates, since no comparable rates have been reported. In 1966 there were 1,300 known narcotic addicts in Britain, a rate of 0.025 per thousand of the population. The Home Office, however, recognizes that this is a gross underestimation. Until we made our findings known to them, the Home Office knew of only eight cases of heroin abuse in Crawley, all of whom were already on our confirmed users list. Had these official figures been used the rate for Crawley would have been 1.4 per thousand instead of the 8.50 we found.

The high rates we obtained for all cases, including probables and suspects, should be interpreted with the utmost caution. However, if one considers the confirmed cases only, which we would regard with reasonable confidence, the rate, especially the male rate of 14.75 per thousand, is surprisingly high.

Does the high prevalence obtained suggest that there was an epidemic outbreak of heroin abuse or simply an endemic state of affairs of some years' standing which was brought to the surface by these investigations ?

A single one-year prevalence rate is not sufficient for estimating the increase of disease in populations. Serial prevalence rates or incidence rates based on the dates of first experience with heroin would be required before we could show that the extent of heroin use had suddenly rocketed. An explosive outbreak of heroin abuse would imply, as in the case of an infectious disease, the simultaneous exposure of a large number of people at risk to a common source of infection (Reid, 1965). There is some evidence that this situation may have existed in Crawley.

Firstly, there seems to have been in Crawley a group of young people connected in many ways (neighbourhood, age, school, communal holidays, etc.), and therefore subject to simultaneous exposure. This is supported by the fact that the relatively few drug users we knew gave us the names of so many others who subsequently proved to be drug users. The histories given by our patients indicate that while there was no commercial "pushing" of heroin in Crawley in this period there was a fair amount of initiation and sharing among friends in a way similar to that described by Chein *et al.* (1964) among young addicts in New York.

Secondly, there was a change in the habituation pattern. Twenty-three of the 31 cases we have treated and investigated closely had their first experience with heroin in 1966 or the first half of 1967. These became regular users within three months of initiation. In the two patients who were initiated in 1963, however, the time between initiation and regular use was much longer—about one year. This suggests the presence in the last two years of some factor that promoted a sustained interest in heroin after initiation.

Finally, we have the evidence of one of our patients who left school in 1965 and went abroad. On his return in late 1966 he found to his surprise that drugs were the latest "craze" among his schoolmates and one of the main topics of conversation and sharing of experiences.

The picture that we have formed of what probably happened in Crawley is that a small core of young people gradually established drug-taking habits in the years 1963–5. These may be regarded as analogous to a primary source of infection. More recently, under pressure of a wider drug-conscious and drug-oriented environment, secondary cases began to appear.

In this paper we do not set out to examine the social or personality characteristics of these young people in any detail. The information we have on the 31 cases seen by the end of 1967 may be regarded only as a source of hypothesis about the role of environmental characteristics. While it would be premature to draw any conclusions without comparing them with control groups, it may be worth noting that we have no evidence, so far, that these heroin users form any particular group in the population such as a delinquent subculture. All the patients seen were living with their parents; most of them (74%) were in regular employment, and their social background appears to be no different from that of many other families in the area.

## Screening Methods

None of the screening methods we used was ideal. So far as *information from heroin users* is concerned, for example, it might be thought that our patients misinformed us. However, since they knew that we never prescribe heroin they would not benefit by providing names of non-users from whom they could later obtain prescriptions. It would also be unlikely that they would give the names of those who were merely boasting of taking heroin; true heroin users tend to consider themselves a class apart, a sort of secret society, and despise and reject those who claim membership to their brotherhood without proper credentials. Both these assumptions were substantiated by subsequently cross-checking the names provided with those obtained by the other methods (see Tables IV and V).

Two additional factors that gave us greater confidence in data from our patients were: (1) that 58% of those whose names were given to us by the heroin users were named by more than one user; sometimes as many as seven patients had independently given the same name, and (2) six of the eight Crawley names known to the Home Office (1966, 1967, personal communication) reached them in the first instance through a user.

The obvious objection to accepting data from convictions for "possession of heroin" as evidence for confirmed usage is that the convicted person might be carrying or "pushing" the drug rather than using it himself. In Crawley, however, possession of heroin appears to be synonymous with "usage." Up to now we have not found any professional pushers of heroin in the area. The distribution seems to be carried out by the young heroin users on a mutual aid basis. They make trips to London to obtain supplies for themselves, and any surplus they sell.

So far as jaundice as an indicator of heroin is concerned, it would be of no value in a hepatitis-free population. However, as hepatitis is frequent among drug users it would seem to be common in the population at risk.

Cases of anicteric hepatitis would also be missed unless the patient was forced by the severity of the symptom to go to the doctor and the nature of the illness was recognized. It should be noted that none of the cases had had a blood transfusion or an operation in the previous six months.

Two other possibilities must be considered. First, that hepatitis was acquired by the usual orofaecal route of infection and not by injection. Second, that other drugs (especially methedrine at present) could have been injected with shared syringes and needles.

The first possibility—that is, an outbreak of infectious hepatitis spread through the usual route—would have made this survey valueless. However, this does not appear to have been the case in Crawley. Twenty-six of the 33 cases of hepatitis discovered in our survey were independently detected by other screening methods. Of the remaining seven, one was the sister of a confirmed user and the other had a brother who had been convicted for possession of drugs and was known to associate with confirmed heroin users.

As to the second possibility, while there may be no evidence that heroin was the drug injected before hepatitis developed, we are, as mentioned earlier, dealing with a poly-drug problem. Jaundice after injection of lysergide has been reported in the U.S.A. (Materson and Barrett-Connor, 1967), but in our population lysergide is usually taken orally. Methedrine would be a much more likely drug to suspect, but so far in Crawley we have not seen any patient taking methedrine alone. Those who have used this drug have done so in combination with heroin; on the other hand, a large proportion of our patients have been using, at least for some periods, heroin on its own.

## Addiction

Of the 31 cases seen personally 12 were taking heroin daily—up to 4 gr. (260 mg.) a day—nine of these had been on the drug for more than 18 months; 11 had progressed from week-end use to several injections during the week, and had withdrawal symptoms when deprived of heroin. The remaining eight were still taking it only one or two days a week—most of these had started on the drug less than six months previously.

The aim of this survey had been restricted to detecting the prevalence of heroin abuse in the area. Assessment of the degree of dependence cannot be made until all the cases have been examined in detail. Dependence or addiction may be variously defined. If the pattern of drug-taking in the 31 cases so far examined is an indication of what is happening among other young people taking heroin in Crawley, one can conclude that, though the classical "junky syndrome" has not yet developed among them, dependence on the drug is already present.

Judging by this sample, it seems that it is only a question of time before serious addiction syndromes begin to appear among those already on even small amounts of heroin.

## Conclusion

This study has shown that the routine channels by which heroin users are referred for treatment are inefficient early detectors of the disease.

The most productive screening method is clearly information from the heroin users themselves. However, for this to be a feasible method a community-centred treatment unit is needed. Without such a unit and a nucleus of local users in treatment we would not have been able to exploit this method effectively.

Each screening method on its own has a limited value. In order to detect the maximum number of early cases all of them should be used concurrently. A built-in check on the information obtained is provided if this procedure is followed. If we were to recommend one technique that would give the maximum information for an initial assessment of the extent of heroin use in a given population, we should suggest the combined use of jaundice and casualty (amphetamine) surveys. These are simple to carry out, they allow the investigator to estimate the time of the occurrence in his population, and they provide independent and objective medical indicators of heroin use in young people.

### Summary

A survey to estimate the prevalence of heroin abuse in young people in Crawley New Town showed that 8.50 per thousand boys and girls and 14.75 per thousand boys in the age group 15–20 were "confirmed" users.

Five methods of population screening were used. Each has been evaluated in terms of its efficiency as an early detector of heroin abuse. Normal channels of referral to the psychiatrist for treatment of heroin abuse are shown to be inefficient, and it appears that more patients could be brought into treatment earlier by using the screening methods described. It is suggested that hepatitis and amphetamine overdoses in young people are useful early indicators of possible heroin abuse.

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# WINCHESTER ADDRESS

## Sir Bruce Fraser on "The Doctor and the Administrator"

The fourteenth Winchester Address was given by Sir Bruce Fraser in the New Hall of Winchester College on 23 May. Sir Bruce was Permanent Secretary to the Ministry of Health from 1960 to 1964. Below we print extended extracts from his address.

"Let me plunge straight into my central theme and say that the most important thing which doctors and administrators have in common is the desire to serve. I know that this sounds trite and priggish, but I am not going to be frightened off saying it again—the desire to serve. That can include of course the desire to excel, the desire to make changes, and the desire to give leadership. Nothing is worth while which gives no scope for those. What it does not include is the desire to dominate: that may be all right in some walks of life—though I think very few—but it is usually fatal to good medicine or good administration. Let us not be afraid of clichés here. If we say that a doctor wants 'to serve the cause of suffering humanity,' or that an administrator wants 'to serve the public interest,' we are apt to put these phrases in inverted commas to show that we are much too sophisticated to be taken in by them. But why should we not admit to ourselves when we are in the Palace of Truth—in front of our shaving-mirrors, shall we say, or even in the Hall of Winchester College—that these things are exactly what we do want to do? A doctor or an administrator without the desire to serve is in the wrong profession.

"Political considerations have, or ought to have, comparatively little effect on the doctor—I mean national politics, not medical politics. Whatever his own political views, he can flourish professionally under many different forms of government—even under a mild dictatorship. It is only when dictatorship seeks to control professional standards, methods, or ethics, or denies full scope to scientific truth, that the profession needs to rebel. I am over-simplifying, I know, because in our democracy, which is very far from a dictatorship, politics have entered, and quite properly entered, into many matters of concern to the profession, such as prescription charges and private practice. But I think I can illustrate the point in general by inviting you to consider the 10 men who have been Ministers of Health since the war. If doctors of all political views were to elect the best three by ballot, I think it would be found that not all the three were of the same political party, not all now alive, and not all now out of office.

"The administrator is not only more concerned than the doctor with political considerations; he must also, in a democracy, be more responsible to public opinion, which is not the irrelevant mumbling of his inferiors but the voice of his ultimate masters, whose money he accepts and whose interests he serves. He also has to live with the fact that those masters are hard to please, and that the rewards which success may bring him will never include popular acclaim. Doctors stand very high in public esteem; in a recent opinion poll they came second only to nurses in the list of praiseworthy occupations. Administrators came nowhere—literally nowhere, for no one even mentioned them.

"For my part, I think this is absolutely right. It is healthy that people in general—and the press too—should be critical of their *fonctionnaires*, even unfairly critical, provided of course that the criticism is not malicious or deliberately tendentious. Such an attitude keeps the administrator on his toes and thus actually increases the effectiveness of his service to the community. It is equally desirable that people in general should hold doctors in high regard, both individually and collectively. For the patient's confidence in his doctor is a very valuable factor both in diagnosis and in therapy, and the potential patient's confidence in doctors collectively is important to the success of preventive medicine, immunology, and prophylaxis. So the doctor's high place in public esteem, no less than the administrator's low place, actually increases the effectiveness of his service to the community. . . .

### Are Doctors Over-administered

"I do not think it can be said that the medical profession, or the National Health Service as a whole, is over-administered. Not every doctor would agree with me, but I think it is if anything under-administered. I mean by this that in all areas of the Service, and not only where doctors are responsible, performance could be more efficient, progress more rapid and more sure-footed, if individual effort (which fortunately abounds) were more consistently supported by co-ordinated thinking and planning, by more attention to statistical research, and by more administrative experiment. The great benefits which lively and inventive administration could bring